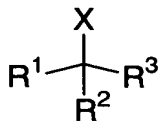
Claims:

1. Method for forming carbon-carbon bonds by reacting compounds of the general formula type (I)



(I)

with π compounds in neutral to basic aqueous or alcoholic solvents or solvent mixtures which have a lower nucleophilicity than the π nucleophile,

where R^1, R^2 and R^3 are independently of one another organic or organometallic radicals or hydrogen,

where X is a leaving group of a type such that the compounds (I) are solvolysed in ethanol with a rate constant k_{EtOH} of $> 10^{-6}$ s^{-1} (25°C),

characterized in that the intermediate carbocations are generated in neutral to basic aqueous or alcoholic solvents or solvent mixtures without using a Lewis acid or protic acid.

2. Method according to Claim 1, characterized in that R^1, R^2 and R^3 are chosen independently of one another from the group of branched or unbranched alkyl, substituted or unsubstituted aryl, substituted or unsubstituted heteroaryl, branched or unbranched alk-2-enyl, cyclo-, bicyclo- and tricycloalkyl, alkoxy, aryloxy or hydrogen, where two of the radicals R^1, R^2 and R^3 form an alkyl ring where appropriate.

3. Method according to either of the preceding claims, characterized in that X is a leaving group chosen from the group of halogen, alkoxy, alkyl- or arylsulphonato, substituted or unsubstituted phenoxy, acyloxy, benzoyloxy, carbamoyl, alkyloxycarbonyloxy, aryloxycarbonyloxy, siloxy, phosphato, phosphonato, hypophosphonato, alkylperoxy, sulphato, sulphenyl, sulphonyl, S-alkylsulphoxy, S-arylsulphoxy, alkylthio, arylthio, thiocyanato, isothiocyanato, ureato and imidyl.

4. Method according to any of the preceding claims, characterized in that the solvent or solvent mixture used comprises solvent components from the group of water, ethanol, methanol, 2,2,2-trifluoroethanol, 1,1,1,3,3,3-hexafluoro-2-propanol, tetrahydrofuran, acetone, acetonitrile and dioxane.

5. Method according to any of the preceding claims, characterized in that compounds of type (I) are reacted with a mixture of a π compound in the appropriate solvent or solvent mixture and possibly further, basic inorganic or organic additions.

6. Method according to any of the preceding claims, characterized in that the π compounds used as nucleophile are aliphatic π compounds from the group of substituted alkenes and alkynes, allyl- and propargylsilanes, alkyl enol ethers, silyl enol ethers, (silyl) ketene acetals and enamines, or aromatic π compounds from the group of donor-substituted or unsubstituted aromatic and heteroaromatic compounds.